

Innovations in Practice: Preliminary evidence for effective family engagement in treatment for child traumatic stress—trauma systems therapy approach to preventing dropout

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Background: This study aimed to obtain preliminary evidence for the extent to which a novel intervention embedded within a systems-oriented treatment model [trauma systems therapy (TST)] engages and retains traumatized children and their families in treatment. **Method:** Twenty youth who had prominent symptoms of posttraumatic stress were randomly assigned to receive TST or care as usual (CAU). **Results:** At the 3-month assessment, 90% of TST participants were still in treatment, whereas only 10% of CAU participants remained. Within-group analyses of TST participants demonstrated significant reductions in posttraumatic stress and aggression as well as a slight improvement in home safety. **Conclusions:** These preliminary findings point to the need to utilize effective engagement approaches to retain traumatized children and their families in treatment.

Key Practitioner Message:

- Premature treatment dropout is a significant problem in child mental health treatment in general and in trauma treatment specifically
- Treatment dropout is especially problematic in community care settings (vs. research settings) and with marginalized populations, such as urban and ethnic minority children and adolescents and their families
- Improved engagement and retention in trauma treatment can be attained by a combination of: (a) forming a treatment alliance with the family; (b) troubleshooting practical barriers to treatment engagement; and (c) psychoeducation about the nature of traumatic stress and the family's involvement with treatment
- An exclusive and strategic focus on treatment engagement and retention at the outset of service delivery can lead to better outcomes

Keywords: Child traumatic stress; family engagement; treatment dropout; trauma systems therapy

Introduction

Twenty-five percent of children and adolescents in the United States are exposed to a traumatic event by the age of 16 years (Costello, Erkanli, Fairbank, & Angold, 2002). Trauma exposure during childhood has been shown to be associated with a host of short-term and long-term physical and mental health problems, including posttraumatic stress disorder (PTSD; Anda et al., 2006; Navalta, 2011; Teicher et al., 2003). Although efficacious treatments exist for childhood traumatic stress (Silverman et al., 2008; Stallard, 2006; Wethington et al., 2008), very few traumatized children engage in these services. For example, children and adolescents traumatized by abusive caregivers and receiving services in community-based clinics discontinue treatment early compared with those youth who do not have such adverse histories (Lau & Weisz, 2003). Up

to 90% of traumatized children and youth living in urban settings terminate treatment early (e.g. McKay, Lynn, & Bannon, 2005). Moreover, ethnic minority children grossly underutilize mental health services, including premature treatment dropout (Kataoka, Zhang, & Wells, 2002; Miller, Southam-Gerow, & Allin, 2008). Promising approaches for improving trauma treatment retention include specific attention to engagement via the use of evidence-based strategies (CATS Consortium, 2007) and the delivery of services in schools (Stein et al., 2003). High retention rates have also been documented in randomized controlled trials for child traumatic stress (Deblinger, Stauffer, & Steer, 2001; Stein et al., 2003). However, engaging and retaining children and their families in treatment continues to be a critical issue for evidence-based programs, especially in traditional outpatient settings and with marginalized populations (Ingoldsby, 2010; McKay & Bannon, 2004).

One particular model for child traumatic stress, trauma systems therapy (TST), addresses treatment engagement by embedding strategies for outreach and engagement at both the organizational and individual level. Organizationally, agencies implementing TST bring together different services to provide collaborative treatment under a common model. A TST program is operated from a multidisciplinary team that includes the capacity to provide four service modules: (a) skill-based psychotherapy; (b) psychopharmacology; (c) home- and community-based care; and (d) systems advocacy (Saxe, Ellis, & Kaplow, 2007). Families are offered various configurations of these modules based on the information derived from the assessment process. Adaptations of TST include embedding the treatment within pre-existing service systems, such as schools, social service agencies, or primary care settings. These organizational elements facilitate treatment access and engagement by streamlining the referral process and assembling services that meet a variety of family needs.

We initially began a randomized controlled trial to test the relative efficacy of TST, but terminated the study early largely due to the inability to make between-group comparisons as discussed below. Hence, this report is focused on our preliminary findings of engaging and retaining children and families in trauma treatment.

Method

Participants

The study was conducted in the child psychiatry clinic of a large, urban hospital between February 2005 and May 2006. The primary entry criteria were exposure to a traumatic event as well as a score ≥ 24 on the UCLA PTSD Reaction Index (PTSD-RI; Steinberg, Brymer, Decker, & Pynoos, 2004). Exclusion criteria included: (a) non-English speaking (child); and (b) the presence of a thought disorder, mental retardation, or developmental disorder. Fifty-five potentially eligible children and their families were initially screened. Six declined to participate after screening and prior to enrollment in a treatment condition. Of the remaining 49, 29 were found to be ineligible (11 for not meeting Criterion A on the PTSD-RI; nine for scoring < 24 on Criteria B, C and D symptoms on the PTSD-RI; six for language; two for exclusionary diagnoses; and one for legal guardianship issues). Thus, a final sample of 20 children and adolescents (age range = 7–18 years; mean age = 13.7 ± 3.6 years) was randomized to receive either TST (eight females, two males) or CAU (three females, seven males). Across children and their caregivers, the vast majority were of ethnic minority descent: 68% black, 18% Hispanic, 10% white and 4% mixed race/ethnicity.

Treatment

Trauma systems therapy. Trauma systems therapy was created to meet the multiple socio-ecological needs of children with histories of trauma exposure (Saxe et al., 2007). The TST model understands traumatic stress as the result of problems in two related domains: (a) the traumatized child's limited capacity to regulate emotions and/or behavior; and (b) the limited capacity of members of the child's social environment to help him or her to regulate emotions and/or behavior (i.e. *trauma system*). TST contains a standardized assessment and treatment planning process aimed to gather information on each of these two domains and to use this information to develop a treatment plan focused on a small number of 'priority problems'

based on this information. TST has shown positive outcomes in an open trial with 110 families from inner-city Boston, MA, and rural New York State (Saxe, Ellis, Fogler, Hansen, & Sorkin, 2005).

Once a family initiates treatment under TST, the treatment planning process includes a formalized treatment engagement strategy called *Ready-Set-Go!*. This strategy consists of three components: (a) forming a treatment alliance with the family; (b) troubleshooting practical barriers to treatment engagement; and (c) psychoeducation about the nature of traumatic stress and the family's involvement with TST. The treatment alliance component aims to reach an agreement with the family to work on a *specified set of problems, in specified ways, towards a specified set of solutions* (Saxe et al., 2007, pp. 157–161). Identifying solutions that may have particular value to family members is emphasized.

Care as usual. Children referred to care as usual (CAU) received eclectic individual psychotherapy provided by a social worker or psychologist. All CAU clinicians also had the option to refer their clients for psychopharmacology and/or home-based family stabilization services. Thus, CAU participants could have received all four services that comprise TST, as they were all accessible during the course of the study. What distinguished TST from CAU was three-fold: (a) all services specifically focused on the *trauma system* (as defined above); (b) services that were provided were coordinated and integrated into one collaborative treatment plan, rather than multiple plans that were developed by disparate providers (e.g. outpatient clinician vs. home-based therapist); and (c) TST treatment began with a module specifically focused on treatment engagement (i.e. *Ready, Set, Go!*). In contrast, no overarching model integrated CAU services nor specified who should receive which services.

The study was fully approved by the institutional review board of Boston Medical Center and included written informed consent (parent/caregiver) and verbal assent (child). All patients were assessed with standardized outcome measures at baseline and 3 months after treatment was initiated.

Results

A between-groups analysis of variance was conducted on patients' various intake scores. No differences were observed between TST and CAU patients with regard to age or outcome measures, although more girls were present in the TST group (80%) than the CAU group (30%). At the 3-month reassessment, 9 of 10 (90%) patients receiving TST were still enrolled in treatment compared with only 1 of 10 (10%) patients in the CAU condition. Thus, between-group comparisons were not available for this endpoint. Paired sample *t*-tests using data from the TST patients indicate substantial reductions on the PTSD-RI Criterion D subscale (i.e. arousal symptoms; $t = 2.65$, $p = .04$) and the Child Behavior Checklist aggressive behavior subscale ($t = 2.85$, $p = .03$; Achenbach, 2001). Improvement on the home safety subscale of the Child Assessment of Needs and Strengths-Trauma Exposure and Adaptation Version approached significance ($t = 2.00$, $p = .08$; Kisiel, Blaustein, Fogler, Ellis, & Saxe, 2009). No other significant within-group differences were found.

Discussion

Preventing dropout is critical to ascertaining a treatment's effectiveness. Simply put, any treatment is

potentially doomed to failure if patients prematurely drop out from receiving the intervention. In community-based settings, more than two-thirds of youth drop out of treatment by seven sessions, which is a significant obstacle given that the length of most evidence-based treatments exceeds eight sessions (Miller et al., 2008). The high attrition rate of patients assigned to standard clinical care in the present study is virtually identical to a recent, larger study of 95 inner-city youth referred for mental health services (only 9% of those patients were still receiving services at 12 weeks; McKay et al., 2005) – our sample was also mostly urban, ethnic minority children and adolescents. In contrast, the preliminary findings of the present study suggest that the strategy of family engagement that was used was associated with the retention of a sizable percentage of children and their families in treatment to the point when clinically meaningful progress was achieved. However, these initial clinical results need to be replicated in a larger, controlled clinical trial.

We attribute the retention rate of the families in the TST group to the specific treatment engagement strategies embedded in TST. TST clinicians are trained to proactively assess barriers to treatment access and to develop with the family a set of practical solutions to surmount these barriers. Interventions in which clinicians explicitly address families' practical and psychological barriers as they enter treatment are effective in improving engagement in early sessions (Ingoldsby, 2010). The TST clinician also emphasizes understanding what is most meaningful to family members (including the child) about what can be achieved in treatment, and organizes treatment to generate value from the family's perspective. A parent, for example, may be primarily distressed about a child's traumatic stress symptoms because she is at risk for losing her job due to repeatedly being called to the child's school because of disruptive behavior. Accordingly, the TST clinician develops a treatment plan that directly references the impact of the child's symptoms on the parent's employment. This link couches the child's disruptive behavior at school with the identified family problem. At the organizational level, the availability and integration of the different service types facilitate the clinician's ability to make meaningful changes in the school to support the child's stability in that setting. Such an approach is consonant with evidence that parent/caregiver alliance is significantly related to more frequent family participation as well as less frequent cancellations and no-shows (Hawley & Weisz, 2005).

Some limitations exist that temper these initial results. First, the small sample size restricts the ability to generalize the findings. Second, we fully acknowledge that equally plausible explanations exist for why more patients in the TST group remained in treatment relative to those in the CAU group. For example, TST patients could have received greater attention than CAU patients, or the disparate dropout rates were due to the differential sex ratios between groups (i.e. girls staying in and boys dropping out). However, the similar retention rates between families in the CAU group of our study and those of studies using similar patients provide convergent validity and preliminary support for our engagement approach as an effective intervention to retain families in treatment and to ultimately improve their lives.

The ability to successfully engage members of a child's social environment is critically important for the effectiveness of any treatment. Effective interventions must include treatment engagement approaches. These preliminary findings suggest that TST may hold promise for engaging traumatized children in treatment.

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